FRITZ Industries, Inc.
Oilfield Chemicals

FL-19
Drilling Fluid – Fluid Loss Additive

DESCRIPTION

Fritz FL-19 is an economical synthetic polymer used to control the loss of filtrate from water-based drilling fluids. FL-19 displays exceptional performance in fresh, salt and KCl water-based fluids.

ADVANTAGES

- FL-19 provides exceptional filtrate control at temperatures from 80°F to 350°F (177 C).
- FL-19 can be used at lower concentrations than most fluid loss additives and is less expensive on a cost per treated barrel basis.

APPLICATION

- Fl-19 has a viscosifying effect on water-based fluids.
- It is ideally suited for most high temperature water-based fluid applications.
- FL-19 should interact well with all other drilling fluids additives.

PROPERTIES

- Off-White Powder
- Specific Gravity – 1.35
- Activity – 100%
- pH – neutral
- Packaged in 50 lb. bags
- Loading Rate – 1 to 8 lb./bbl
- See Fluid Loss and Rheology Data

Corporate Headquarters P.O. Drawer 170040, Dallas, TX 75217
1-800-955-1323 • 1-972-285-5471 • Fax 1-972-270-0179
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FL-19

Water, bbl	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Sepiolite, lb.	4	4	4	4	4	4	4	4	4	10
Bentonite, lb.	4	4	4	4	4	4	4	4	4	0
Attapulgite, lb.	4	4	4	4	4	4	4	4	4	0
Fritz SC-10, lb.	1.5	1.5	1.5	1.5	3	3	3	3	4	3
KCl, lb.	15	15	15	15	15	15	15	15	15	0
KOH, lb.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0
NaOH, lb.	0	0	0	0	0	0	0	0	0	0.5
Barite, lb.	220	220	220	220	220	220	220	220	220	220
Fritz FL-19, lb.	1	1.5			2	6	4	8	8	2
Modified Starch, lb.			2	4						
Properties after hot rolling 16 hr. @ 150°F										
Temperature, °F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F
600 rpm reading	34	36	30	32	35	78	64	124	116	38
300 rpm reading	24	26	28	25	26	47	39	76	69	23
200 rpm reading	21	22	22	21	18	35	30	58	53	17
100 rpm reading	18	16	19	18	13	28	19	37	33	10
6 rpm reading	11	9	11	11	5	7	7	9	9	3
3 rpm reading	11	9	9	11	5	7	7	9	8	3
Plastic Viscosity, cP	10	10	2	7	9	31	25	48	47	15
Yield Point, lb./100 ft^2	14	16	26	18	17	16	14	28	22	8
10 sec. gel, lb./100 ft^2	10	9	14	11	5	8	6	9	9	3
10 min. gel, lb./100 ft^2	22	25	21	22	20	22	20	30	21	2
HTHP, 120°F, 500 psi, ml	40	22	120	30						
HTHP, 200°F, 500 psi, ml					22					17
HTHP, 250°F, 500 psi, ml						10	14			
HTHP, 300°F, 500 psi, ml						17				
HTHP, 325°F, 500 psi, ml						19				
HTHP, 350°F, 500 psi, ml						32				
HTHP, 375°F, 500 psi, ml								20		
HTHP, 400°F, 500 psi, ml								46	18	

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Water, bbl	0.82				0.82	0.82		0.82	0.82		
Sepiolite, lb.	4				4	4		4	4		
Bentonite, lb.	4				4	4		4	4		
Attapulgite, lb.	4				4	4		4	4		
Fritz SC-10, lb.	3				3	3			4		
Polymer Thinner, lb.								3			
KCl, lb.	15				15	15		15	15		
KOH, lb.	0.5				0.5	0.5		0.5	0.5		
Barite, lb.	220				220	220		220	220		
Fritz FL-19, lb.	6							6	8		
Polymer FLA – A, lb.					6						
Polymer FLA – B, lb.						6					
Properties after hot rolling 16 hrs @ 150°F	Before Static Aging	Static Aging @ 300°F	Static Aging @ 325°F	Static Aging @ 350°F	Before Static Aging	Before Static Aging	Static Aging @ 350°F	Before Static Aging	Before Static Aging	Static Aging @ 400°F	Static Aging @ 350°F
Temperature, °F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F	120°F
600 rpm reading	89	61	56	44	26	77	57	93	118	44	60
300 rpm reading	55	35	35	38	20	47	35	57	70	31	39
200 rpm reading	41	26	26	29	17	37	28	44	54	27	29
100 rpm reading	27	16	17	27	16	28	17	30	32	24	21
6 rpm reading	7	3	5	12	6	5	5	7	8	12	6
3 rpm reading	6	3	4	11	6	5	5	7	7	11	6
Plastic Viscosity, cP	34	26	21	6	6	30	22	36	48	13	21
Yield Point, lb./100 ft^2	21	9	14	32	14	17	13	21	22	18	18
10 sec. gel, lb./100 ft^2	4	3	6	8	9	10	4	5	4	12	6
10 min. gel, lb./100 ft^2	26	5	12	18	24	11	14	28	24	21	19
HTHP, 300°F, 500 psi, ml		20									
HTHP, 325°F, 500 psi, ml			26								
HTHP, 350°F, 500 psi, ml	15			56(5min)	108	18	13	14			60
HTHP, 400°F, 500 psi, ml									14	98(5min)	
pH					8.21	8.42		8.72	8.19	8.3	8.41

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